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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/580,822	05/26/2006	Janick Bigarre	291795US2PCT	1289
22850	7590	10/11/2007		
OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314			EXAMINER BARLOW, JOHN E JR	
			ART UNIT 2863	PAPER NUMBER
			NOTIFICATION DATE 10/11/2007	DELIVERY MODE ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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oblonpat@oblon.com  
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**Office Action Summary**

Application No.

10/580,822

Applicant(s)

BIGARRE ET AL.

Examiner

Manuel L. Barbee

Art Unit

2857

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 02 October 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 May 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>10/2/06</u> . | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Specification***

1. The disclosure is objected to because of the following informalities:

On page 9, line 5, after "sample", insert --1-- to refer to the reference numeral in Figure 1.

Appropriate correction is required.

### ***Claim Objections***

2. Claims 3-6 are objected to because of the following informalities:

Claims 3-6 appear to use the words "default" and "fault" interchangeably. The claims should be amended to use either "default" or "fault" consistently.

On line 10 of claim 3, "the same manufacturing process" lacks antecedent basis.

Appropriate correction is required.

### ***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 1-6 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

As per claim 1:

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Lines 8-11 have limitations for making N measurements on components while the component receives an electronic beam. It is not clear whether the N measurements are made on each component or on N components or which one of the components receives the electronic beam.

As per claim 2:

Claim 2 has limitations for an integration of values that is "taken into account." It is not clear how the values are taken into account for calculating the average cathodoluminescence value.

As per claims 3-6:

On lines 3-6 of claim 3, there are limitations for determining "whether said surface has a default density that is less than a default density beyond which the optical component is likely to be damaged...." The phrase "beyond which" does not clearly show whether the default density is a maximum or minimum beyond which damage is likely to occur. On line 10 of claim 3, the phrase "in particular" makes it unclear whether the limitations following the phrase are part of the claimed invention. On line 11 of claim 3, it is unclear to what "they" refers. Claims 4-6 depend from claim 3, and therefore, incorporate the defective language.

### ***Claim Rejections - 35 USC § 102***

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

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A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

6. Claim 3 is rejected under 35 U.S.C. 102(b) as being anticipated by US Patent No. 4,395,242 to Liller et al. (Liller).

With regard to producing samples of the manufacturing process, Liller teaches measuring luminescence in a cathode ray tube to monitor when luminescence disappears (col. 5, lines 10-30). With regard to a preliminary calibration phase that correlates between cathodoluminescence and laser flux behavior, Liller teaches a reference value (col. 5, lines 10-30). With regard to producing a second sample and accepting the component for all behavior corresponding to thresholds greater than the sample and rejecting the component for all behavior conditions corresponding to thresholds less than the value measured and repeating for other samples, Liller teaches accepting or rejecting cathode ray tubes based on comparing the extinction voltage obtained from the measurement of cathodoluminescence with a threshold.

***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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8. Claims 1 and 2 are rejected under 35 U.S.C. 103(a) as being unpatentable over "Trapping of electrical charges and laser damage" in Proceedings of the International Society of Optical Engineering, Vol. 4932, May 2003 by Bigarre et al. (Bigarre) in view of US Patent No. 6,338,790 to Feldman et al. (Feldman).

As per claim 1:

With regard to making a number of measurements of cathodoluminescence on components from a first manufacturing process, Bigarre teaches cathodoluminescence measurements on a first sample (page 260, Section 4.2; page 264, Section 4.2.4). With regard to repeating on components from other manufacturing processes, Bigarre teaches making cathodoluminescence measurements on a second sample (page 264, Section 4.2.4; Figures. 9, 10).

With regard to deciding the most advantageous manufacturing process based on the lowest cathodoluminescence value, Bigarre teaches considering the sample with the lowest defects (page 264, Section 4.2.4). Bigarre does not teach averaging cathodoluminescence values. Feldman teaches averaging measurements from multiple sensors (col. 48, lines 18-39). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the cathodoluminescence measurement, as taught by Bigarre, to include average measurements from multiple sensors, as taught by Feldman, because then a single malfunctioning electrode would not have caused an error in the overall measurement (Feldman, col. 48, lines 18-39)

As per claim 2:

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With regard to repeating measurement for different energy values and taking an integration of the cathodoluminescence values in calculating the average cathodoluminescence value, Bigarre teaches using measurements made at two energy levels (page 264; Section 4.2.4).

***Allowable Subject Matter***

9. Claims 4-6 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

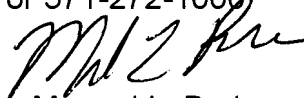
***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Manuel L. Barbee whose telephone number is 571-272-2212. The examiner can normally be reached on Monday-Friday from 9-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eliseo Ramos-Feliciano can be reached on 571-272-7925. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Manuel L. Barbee  
Examiner  
Art Unit 2857

mlb

September 30, 2007